

## REMARKS

### A. Request for Reconsideration

Applicant has carefully considered the matters raised by the Examiner in the outstanding Office Action but remains of the position that patentable subject matter is present. Applicant respectfully requests reconsideration of the Examiner's position based on the Certified English translation of the priority document JP 2002-215164 and the following remarks.

### B. The Invention

The present invention is directed to a method for preserving an ink-jet ink and an image forming method utilizing the ink. The ink-jet ink is curable by irradiation with an active energy ray and is composed of a cationic polymerizable monomer and an initiator. In one of the novel aspects of the invention, the ink-jet ink is kept in a sealed container having a water ratio of 1.5 to 5.0 weight% in an inside portion of the sealed container.

The Inventor has discovered that a water ratio less than 1.5 weight% inside the container increases the ink viscosity and causes unstable jetting, particularly when the ink drop amount is small, while a water ratio greater than 5.0 weight% lowers

the curing ability of the ink, especially when the ink is cured just after the ink impacts the recording material (page 8, lines 9-17). Thus, keeping the ink in a sealed container having a water ratio of 1.5 to 5.0 weight% is critical.

C. Status of the Claims

Claims 1-13 are presented for further prosecution. No claim amendments have been made at this time.

D. The Office Action

Claims 1-7, 11 and 12 had been rejected as being anticipated by Laksin (US 6,232,361). Claims 1, 2, 5, 6, 11 and 12 had been rejected as being anticipated by Nakajima (US 2003/0199612). Claims 1, 2, 5, 6, 11 and 12 had had been rejected as being anticipated by Hirai (US 6,846,074). Claims 8 and 13 had been rejected as being unpatentable over Laksin in view of Edlein (US 6,528,127). Claims 9 and 10 had been rejected as being unpatentable over Laksin in view of Fujii (US 6,471,318).

1. The US filing dates of Nakajima and Hirai are after the priority date of this Application

The April 2, 2003 US filing date of Nakajima and the June 2, 2003 US filing date of Hirai are after the July 24, 2002 foreign priority date of this Application.

Applicant has enclosed a certified English translation of the priority document to perfect the claim of priority in this Application and to remove Nakajima and Hirai as prior art. Support for the claims of this Application can be found in the following portions of the priority document:

|          |   |                                      |
|----------|---|--------------------------------------|
| Claim 1  | - | Claims 1, 4 and page 44, lines 15-20 |
| Claim 2  | - | Claim 2                              |
| Claim 3  | - | Claim 3                              |
| Claim 4  | - | Claim 3                              |
| Claim 5  | - | Claim 4                              |
| Claim 6  | - | Claim 4                              |
| Claim 7  | - | Claim 4                              |
| Claim 8  | - | Claim 5                              |
| Claim 9  | - | Claim 6                              |
| Claim 10 | - | Claim 7                              |
| Claim 11 | - | Claim 8                              |
| Claim 12 | - | Claim 9                              |
| Claim 13 | - | Claim 10                             |

It is respectfully submitted that the claims of this Application find support in the priority document and that Nakajima and Hirai are no longer prior art. The rejections based on Nakajima and Hirai are deemed to be moot.

2. Laksin does not teach or suggest an ink preservation method wherein the ink is kept in a sealed container having the claimed water ratio

The present invention is directed to an ink conservation method (page 4, lines 9-16). After the ink is formed, the ink is stored in a sealed container having a specific water ratio measured by the Karl-Fischer method. The water ratio can be achieved by sealing the ink in a container under particular temperature and humidity conditions (page 8, lines 6-9). The Inventor has discovered that storing the ink in the sealed container with the specific water ratio enables a minute image to be formed (page 8, paragraph 2). In addition, the Inventor has discovered that the claimed water ratio range is critical, as a water ratio less than 1.5 weight% increases the ink viscosity and causes unstable jetting, while a water ratio greater than 5.0 weight% lowers the curing ability of the ink (page 8, lines 9-17). Thus, the present invention is directed to an ink preservation method, wherein the ink is stored in a sealed container that has a specific water ratio.

Laksin does not suggest an ink preservation method. Moreover, Laksin does not suggest a preservation method where the ink is stored in a sealed container that has a specific water ratio. In contrast to the claimed preservation method,

Laksin merely teaches an ink product, and no mention is made of the conditions under which the ink product is preserved.

The Examiner has cited col. 6, lines 1-5 of Laksin to teach the water content inside the sealed container of the present invention. However, the cited section of Laksin teaches the water content of the ink, not the water content inside the sealed container during storage. Thus, Laksin does not suggest the claimed process step of keeping the ink in a sealed container that has a specific water ratio requirement. Applicant respectfully submits that Laksin does not suggest the claimed preservation method.

In addition to the above, Laksin teaches away from the present invention. Laksin explains that a "key aspect" of his invention is that the viscosity of the ink may be altered by adjusting the amount of water or the amount of the initiator (col. 5, lines 20-25). The Examples of Laksin show water ratios between 10 and 22.5 weight%, falling above the claimed range. Thus, assuming one were to place the inks of the Examples of Laksin in a sealed container for storage purposes, the sealed container would initially have a water ratio 10 to 22.5 weight% which is outside the claimed range.

Applicant respectfully submits that the present invention is patentable over Laksin.

E. Edlein and Fujii

Edlein has been cited to teach the thickness of the ink after the irradiating step. Fujii has been cited to teach the size of the jetted droplets.

Edlein and Fujii do not suggest the claimed preservation method where the ink is kept in a sealed container having a specific water ratio. Applicant respectfully submits that the present invention is patentable over all the cited references taken alone or in combination.

F. Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending

condition, appropriate requests are hereby made and  
authorization is given to debit Account # 02-2275.

Respectfully submitted,

MUSERLIAN, LUCAS & MERCANTI, LLP

By: Donald C. Lucas  
Donald C. Lucas, 31,275  
Attorney for Applicant(s)  
475 Park Avenue South, 15<sup>th</sup> Floor  
New York, New York  
Tel. # 212-661-8000

Encl: Certified English translation of  
the Priority Document JP 2002-215164  
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